

WHAT IS CLAIMED IS:

1. A surgical instrument comprising;
an end effector which executes medial treatment;
a support which supports the end effector;
5 a base member which pivotally supports the
support;
an elongate member which has distal and proximal
ends, and which is located in the distal end of the
elongate member; and
10 an extended portion which is disposed in the
distal end of the elongate member to be extended with
respect to the base member located in the distal end of
the elongate member.
2. The surgical instrument according to claim 1,
15 wherein the extended portion is disposed in the
distal end of the elongate member to regulate rotation
of the support pivotally supported by the base member.
3. The surgical instrument according to claim 2,
wherein the extended portion is formed integrally
20 with the elongate portion.
4. The surgical instrument according to claim 1,
wherein the elongate member is a sheath, the
sheath and the extended portion are formed integrally
with each other, and the sheath and the extended
25 portion are included in an insertion section inserted
into a body cavity.
5. The surgical instrument according to claim 4,

wherein the extended portion has a slope inclined in an axis of the sheath.

6. The surgical instrument according to claim 4, wherein the sheath is formed in a circular tube shape, and

the extended portion has a shape obtained by cutting a circular tube integrally extended to the sheath in the axial direction from the sheath, and cutting the same from a direction orthogonal to the axis of the sheath.

7. The surgical instrument according to claim 1, wherein the sheath and the extended portion have rigidities to maintain shapes of the sheath and the extended portion when the insertion section is inserted into the biomedical tissue.

8. The surgical instrument according to claim 7, wherein the insertion section and the treatment section have conductive areas to supply high-frequency power to the treatment section, and are electrically connected to each other, and

the sheath has an inner tube, and an insulating outer tube which covers a full periphery of an outer peripheral surface of the inner tube.

9. The surgical instrument according to claim 4, wherein the sheath is formed in a circular tube shape, and

the extended portion has a slope in which

a circular tube integrally extended to the sheath is cut from the sheath obliquely in the axial direction of the sheath.

10. The surgical instrument according to claim 4,
5 wherein the sheath is formed in a circular tube shape, and

a section of the extended portion orthogonal to the axis of the sheath has a circular arc shape.

11. The surgical instrument according to claim 4,
10 wherein the insertion section and the end effector have conductive areas to supply high-frequency power through the insertion section to the end effector, and are electrically connected to each other, and

the sheath and an outer peripheral surface of the
15 extended portion are covered with an insulating member.

12. The surgical instrument according to claim 4, further comprising;

an operation section which rotates the end
effector and the support pivotally supported by the
20 base member with respect to the base member,

wherein the insertion section has first and second driving members which are arranged side by side, and which have distal and proximal ends, and is connected to the proximal ends of the first and second driving
25 members so that the first driving member is driven to operate the end effector, and the second driving member is driven to rotate the support.

13. The surgical instrument according to claim 12,
wherein the end effector is a pair of jaws to be
relatively opened/closed,

at least one of the pair of jaws is supported by
5 the support, and

the support is connected to the distal end of the
second driving member to rotate in one plane in an axis
of the second driving member.

14. The surgical instrument according to claim 13,
10 further comprising:

a sliding member which is supported by at least
one of the jaws, and slid in an axial direction of the
support to open/close the jaws, and

a connection member which has distal and proximal
15 ends, the sliding member being connected to the distal
end of the connection member to open/close the jaws,
and the distal end of the first driving member being
connected to the proximal end of the connection member.

15. The surgical instrument according to claim 1,

20 wherein the first driving member has conductive
areas to supply high-frequency power to the end
effector, and the first driving member and the end
effector are electrically connected to each other, and

the sheath and the outer peripheral surface of the
25 extended portion are covered with an insulating member.

16. The surgical instrument according to claim 15,
wherein the proximal end of the first driving

member has insulation.

17. The surgical instrument according to claim 4,
wherein the sheath has an attaching/detaching
mechanism disposed in the proximal end of the insertion
5 section to be switched between a position of being
fixed to cover an outer periphery of the insertion
section and a position of being shifted from the outer
periphery of the insertion section.

18. The surgical instrument according to claim 17,
10 wherein the attaching/detaching mechanism has a
bayonet connection structure.

19. The surgical instrument according to claim 1,
further comprising:

an end effector operation section which is
15 disposed in the proximal end of the elongate member to
operate the end effector; and

a rotation operation section which is disposed in
the proximal end of the elongate member to rotate the
support pivotally supported by the base member.

20 20. The surgical instrument according to claim 19,
further comprising:

a first transmitting member which has distal and
proximal ends, the proximal end being dynamically
connected to the end effector operation section, and
25 the distal end being dynamically connected to the end
effector; and

a second transmitting member which has distal and

proximal ends, the proximal end being dynamically connected to the rotation operation section, and the distal end being dynamically connected to the support.

5 21. The surgical instrument according to claim 20, wherein the first transmitting member has at least a first part disposed in the elongate member and a second part disposed in the support, the first and second parts being dynamically connected.

10 22. The surgical instrument according to claim 20, wherein the elongate member is a sheath, and the first and second transmitting members are inserted through the sheath.

15 23. The surgical instrument according to claim 1, wherein the support comprises a pivot, and the end effector is supported by the pivot.

20 24. The surgical instrument according to claim 1, wherein the end effector is constituted of a pair of jaws which are supported by the pivot, and relatively rotated by using the pivot as a rotary axis.

25 25. The surgical instrument according to claim 24, further comprising:
an opening/closing section which is disposed in the proximal end of the elongate member to open/close the pair of jaws relatively; and
a rotation operation section which is disposed in the proximal end of the elongate member to rotate the support pivotally supported by the base member.

26. The surgical instrument according to claim 25,
further comprising:

5 a first transmitting member which has distal and
proximal ends, the proximal end being dynamically
connected to the opening/closing section, and the
distal end being dynamically connected to the jaws; and

a second transmitting member which has distal and
proximal ends, the proximal end being dynamically
connected to the rotation operation section, and the
10 distal end being dynamically connected to the support.

27. The surgical instrument according to claim 26,
wherein the first transmitting member has at least
a first part disposed in the elongate member and a
second part disposed in the support, the first and
15 second parts being dynamically connected.

28. The surgical instrument according to claim 26,
wherein the elongate member is a sheath, and the
first and second transmitting members are inserted
through the sheath.

20 29. A surgical instrument comprising:
an insertion section which has distal and proximal
ends, and a sheath, the sheath including a notch which
is partially notched on a distal end;

a treatment section connected to the distal end of
25 the insertion section to treat a biomedical tissue; and

an operation section operated by an operator, the
operation section being connected to the proximal end

of the insertion section and operated by the operator to generate an operation force, which is transmitted through the insertion section to the treatment section.

30. The surgical instrument according to claim 29,
5 wherein the treatment section has a rotation mechanism disposed to rotate the treatment section within a predetermined range with respect to the insertion section, and

the notch of the sheath is disposed in the
10 rotational range of the treatment section.

31. The surgical instrument according to claim 30,
wherein the insertion section and the treatment section have conductive areas to supply high-frequency power to the treatment section, and are electrically
15 connected to each other, and

the sheath has an inner tube, and an insulating outer tube which covers a full periphery of an outer peripheral surface of the inner tube.

32. A surgical instrument comprising:
20 an insertion section which has distal and proximal ends;

a treatment section connected to the distal ends of the insertion section to treat a biomedical tissue;

an operation section operated by an operator, the
25 operation section being connected to the proximal end of the insertion section and operated by the operator to generate an operation force, which is transmitted

through the insertion section to the treatment section;
and

5 a sheath which covers an outer periphery of the
insertion section, and a distal end, the distal end of
the sheath having an area extended along an axis of the
sheath more than other portions.